

Appl. No. 10/075,293
Amendment dated: February 25, 2004
Reply to OA of: September 8, 2003

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-33 (canceled).

39(previously presented). A sandwich dielectric structure having a reduced thick film stress comprising:

a first dielectric layer having a thickness between 100 to 700 nm formed on and contiguous with a substrate;

a liquid-phase-deposition (LPD) silica layer having a thickness between 5 to 100 nm formed on and contiguous with the first dielectric layer; and

a second dielectric layer having a thickness between 100 to 700 nm formed on and contiguous with the liquid phase deposited (LPD) silica layer.

40(previously presented). The structure according to claim 39, wherein said first dielectric layer and said second dielectric layer are a low-K dielectric material of methyl silsesquioxane (MSQ), or hydrogen silsesquioxane (HSQ).

41(previously presented). The structure according to claim 40, wherein said first dielectric layer and said second dielectric layer are methyl silsesquioxane (MSQ).

42(previously presented). The structure according to claim 39, wherein said LPD silica layer is a fluorine-containing silica layer comprising 6-10 atom% of fluorine.

43(previously presented). The structure according to claim 42, wherein said LPD silica layer is a fluorine-containing silica layer and said fluorine-containing silica layer is subjected to a nitrogen plasma treatment or NH₃ plasma treatment, so that the

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treated fluorine-containing silica layer comprises 3-50 atom% of nitrogen and 0.5-10 atom% of fluorine.

44(previously presented). The structure according to claim 39, wherein the LPD silica layer has a thickness between 10 to 30 nm.

45(previously presented). The structure according to claim 39, wherein a summation of the thickness of the first dielectric layer and the thickness of the second dielectric layer are between 800 to 1200 nm.